

REMARKS/ARGUMENTS

The Office Action mailed May 4, 2005 has been carefully considered.

Reconsideration in view of the following remarks is respectfully requested.

Status of the Claims

Claims 1-4, 9-24, 26, 30-32, 52, and 63-85, 87-91 are now pending. No claims stand allowed.

All of the pending claims remain unchanged, but the listing of the claims is presented for the Examiner's convenience.

The 35 U.S.C. §103 Rejection

Claims 1-4, 9-24, 26, 30-32, 52, 63-85 and 87-91 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Brendel et al. (U.S. Pat. No. 6,539,494) in view of Lamarque et al. (U.S. Pat. No. 6,690,651), among which claims 1, 9, 13, 17, 20, 30, 63, 66, 68-69, 71, 74, 76, 78, 81 and 83 are independent claims. This rejection is respectfully traversed.

According to M.P.E.P. §2143,

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.

Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Claim 1 defines a backup server for enabling a data communications network to recover from a local server failure, the data communications network including a network access server (NAS) for coupling a call placed from a call-in user to the data communications network, the NAS having a memory associated therewith. The claimed backup server comprises (a) an information packet receiver responsive to the local server failure, the information packet receiver receiving from the memory associated with the NAS an information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information of the ongoing call for maintaining connection of the ongoing call if the local server fails, and (b) a parser for reconstructing the call information from the information packet such that the backup server maintains the ongoing call to the data communications network, as recited in claim 1.

In the Office Action, the Examiner contends that the elements of the presently claimed invention are disclosed in Brendel except that Brendel does not teach a user's placing a request by calling in. Referring to FIG. 8 of Brendel, the Examiner specifically equates Brendel's "using a load balancer 70" with the claimed backup server, Brendel's individual servers 56, 51, and 52 in the server farm with the claimed local server, and Brendel's client 10 with a user (page 3, lines 4-7 of the Office Action). The Office

Action further contends that Lamarque teaches the missing feature and that it would be obvious to one having ordinary skill in the art at the time of the invention to incorporate Lamarque into Brendel in order to obtain the claimed invention. The Applicants respectfully disagree for the reasons set forth below.

It should be noted that although the Examiner alleges that Brendel teaches the back up server, local server, and a user, the Examiner fails to point out any element in Brendel corresponding to the network access server (NAS) for coupling a call placed from a call-in user to the data communications network. However, the Examiner might allegedly mean to equate Brendel's load balancer 70 with the NAS, because the load balancer itself is merely an intermediary between the client and the servers (see FIGS. 11A and 11B of Brendel), and does not have any function as a server (see FIGS. 6 and 8, and column 10, line 41-44 of Brendel).

Even if the Examiner might allegedly consider the load balancer 70 as the NAS, however, neither the load balancer 70 nor Brendel's server teaches the claimed information packet receiver responsive to the local server failure, and sending or receiving an information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information of the ongoing call for maintaining connection of the ongoing call if the local server fails, as recited in claim 1, for the reasons set forth below.

In Brendel, the load balancer only transfers the condition or state of the connection to the assigned server currently processing the user request (column 12, lines 38-42), not a backup server for recover from a local server failure. Since the assigned server is processing the user's request, the assigned server cannot be a backup server which is to take over the local sever (i.e., the assigned server itself) if the local server fails. In Brendel, "condition or state of the connection" is transferred by the TCP state migration process 120 in which a TCP connection between the browser and the assigned server is established by "migrating" the TCP connection between the browser and the load balancer (see column 12, lines 38-54 of Brendel). That is, the load balancer first acts as if it were a server in order to establish a TCP connection with the browser, and then (after receiving a URS request) plays the browser's role by repeating the TCP connection process in order to establish a TCP connection with the assigned server, which results in a TCP connection between the browser and the assigned server (FIG. 11A, also see column 9, lines 33-57 of Brendel). There is no mention or suggestion in Brendel that such "condition or state of the connection" of the browser (the alleged call information) is sent other than the currently assigned server, or otherwise any server other than the assigned server receives such "condition or state of the connection" of the browser.

Furthermore, Brendel's load balancer only assigns a URL request to a server based on the resource-based load balancing, not in response to failure of any server. Thus, Brendel fails to teach or suggest any transfer of the alleged call information to any server responsive to the local server failure, as recited in claim 1.

Accordingly, Brendel fails to teach or suggest the claimed backup server including an information packet receiver responsive to the local server failure, which receives information packet containing call information of the ongoing call for maintaining connection of the ongoing call if the local server fails, as recited in claim 1.

In addition, although Brendel's servers 52 and 52A-52C (in the server farm) or servers 51, 52 and 56 (FIG. 8) are provided for resource-based load balancing, not for backing up one another in case of the server failure, it should be noted that Brendel does mention a back-up load balancer 70' and dual internet connections 142 and 148 (routers 140 and 146) (column 18, lines 44-45 and 55-56, column 19, lines 9-14). However, there is no mention or suggestion in Brendel that any "condition or state of the connection" is transferred from one load balancer to another (back-up) load balancer. Thus, Brendel lacks any suggestion indicating sending or transferring "condition or state of the connection" to a back-up entity, even if the back-up load balancer is considered.

Furthermore, Brendel described the advantages of the invention as follows:

... [A] browser sees a failure only when the assigned server fails while processing the URS request. ... The invention provides a highly fault-tolerant web site. Such a web site greatly reduces the probability that a user gets the "SERVER NOT RESPONDING" error message when a server fails at the web site. Request-level granularity results in fewer browser users being caught when a server crashes; only those users having a current request being served by that server experience an error. Other requests in a session at that web site, and future sessions are not affected.

(Column 19, lines 49-63, emphasis added)

Accordingly, in spite of providing a plurality of servers, Brendel's load balancing is clearly not able to maintain an on-going connection between a browser and an assigned server when the assigned server fails. Thus, contrary to the Examiner's allegation, Brendel does not teach maintaining an on-going connection if the local server fails, as recited in claim 1.

In addition, it should be noted that the TCP connections between a browser and a server is different from connection between a call-in user and a NAS.

Therefore, Brendel, whether considered alone or combined with or modified by Lamarque, does not teach or suggest the claimed backup server as recited in claim 1.

Claim 9 defines a local server for enabling a data communications network to recover from a failure of said local sever, the data communications network including a backup server and a network access server (NAS), the NAS coupling a call placed from a call-in user to the data communications network, the NAS having a memory associated therewith. The claimed local server comprises (a) an encoder for generating an information packet associated with an ongoing call placed by the call-in user via the NAS, the information packet containing call information for maintaining connection of the ongoing call if the local server fails, and (b) a sender for transmitting the information packet from the encoder to the memory associated with the NAS, the information packet being stored in the memory to be available to the backup server if the local server fails, as recited in claim 9.

As discussed above in detail, Brendel's system merely teaches transferring the "condition or state of the connection" (the alleged call information) to the assigned (local) server, failing to teach or suggest sending the alleged call information to a backup server responsive to the local server failure. Brendel also fails to teach or suggest maintaining an on-going connection when the assigned server fails. Thus, the same arguments are applicable here. Accordingly, Brendel, whether considered alone or combined with or modified by Lamarque, does not teach or suggest the claimed local server as recited in claim 9.

Claim 17 defines a network access server (NAS) for maintaining a call placed from a call-in user to a data communications network, the data communications network including a local server for servicing the call, and a backup server capable of servicing the call. The claimed NAS comprises (a) a receiver for receiving an information packet from the local server, the information packet associated with an ongoing call placed to the NAS by the call-in user, the information packet containing context data of the ongoing call for maintaining connection of the ongoing call, (b) an associated memory for storing the information packet, (c) a failure detector for determining if a failure of the local server has occurred, and (d) a sender for transmitting the information packet from the associated memory to the backup server if the local server failure has occurred.

Similarly, as discussed above in detail, Brendel's system merely teaches transferring the "condition or state of the connection" (the alleged call information) to the assigned (local) server, failing to teach or suggest sending the alleged call information to a backup server responsive to the local server failure. Brendel also fails to teach or

suggest maintaining an on-going connection when the assigned server fails. Thus, the same arguments are applicable here. Accordingly, Brendel, whether considered alone or combined with or modified by Lamarque, does not teach or suggest the NAS as recited in claim 17.

Other independent claims 13, 20, 30, 63, 66, 68-69, 71, 74, 76, 78, 81 and 83 includes, among others, substantially the same distinctive features as discussed above. Accordingly, it is respectfully requested that the rejection of claims based on Brendel and Lamarque be withdrawn.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Dependent Claims

Claims 2-4 and 85 depend from claim 1, claims 10-12 and 87 depend from claim 9, claims 14-16 and 88 depend from claim 13, claims 18-19, 52 and 89 depend from claim 17, claims 21-24, 26 and 90 depend from claim 20, claims 31-32 and 91 depend from claim 30, claims 64-65 depend from claim 63, claim 67 depends from claim 66, claim 70 depends from claim 69, claims 72-73 depend from claim 71, claim 75 depends from claim 74, claim 77 depends from claim 76, claims 79-80 depend from claim 78, claim 82 depends from claim 81, and claim 84 depends from claim 84, and thus include the limitations of respective independent claims. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable at least for the same reasons.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Conclusion


It is believed that this Response places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-1698.

Respectfully submitted,
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